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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,583	08/25/2003	Robert Beverley Basham	TUC920030102US1	4086
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Kunzler & McKenzie 8 EAST BROADWAY SUITE 600 SALT LAKE CITY, UT 84111			EXAMINER TRAN, PHILIP B	
			ART UNIT 2155	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/648,583	Applicant(s) BASHAM ET AL.	
	Examiner Philip B. Tran	Art Unit 2155	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/25/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4-5, 19, 22-23, 25 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Pesola et al (Hereafter, Pesola), U.S. Pat. No. 7,007,152.

Regarding claim 1, Pesola teaches an apparatus for communicating control messages between a first device and a second device [see Abstract], comprising:

a communication module configured to direct control messages between a first device and a second device through an intermediate device, the intermediate device coupled to the first device by a control path and to the second device by a data path (= volume translation apparatus is acting as an intermediate device between host and data storage library wherein there is a control path and a I/O data path) [see Abstract and Figs. 1-3];

a translation module configured to translate control messages received over the control path at the intermediate device to transport data messages and transport data messages received over the data path at the second device to control messages (=

volume mapping module between the host and the data storage library) [see Figs. 1-3 and Col. 5, Line 16 to Col. 6, Line 55]; and

a transmission module configured to send transport data messages over the data path to the second device and control messages from the second device over the control path to the first device (= sending control message and data message over control path and data path between host and data storage library) [see Abstract and Fig. 2].

Regarding claim 4, Pesola further teaches the apparatus of claim 1, further comprising a second device notifying the intermediate device of a control message for the first device and the intermediate device transferring the control message from the second device to the first device in response to a message from the first device [see Fig. 2 and Col. 5, Line 16 to Col. 6, Line 55].

Regarding claim 5, Pesola further teaches the apparatus of claim 1, wherein the first device and second device are configured to exchange control messages with an intermediate device [see Fig. 2].

Claims 19 and 22-23 are rejected under the same rationale set forth above to claims 1 and 4-5.

Claim 25 is rejected under the same rationale set forth above to claim 1.

Claim 28 is rejected under the same rationale set forth above to claim 1.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 2-3, 20-21, 26-27 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pesola et al (Hereafter, Pesola), U.S. Pat. No. 7,007,152 in view of Chernock et al (Hereafter, Chernock), U.S. Pat. No. 6,772,209.

Regarding claims 2-3, Pesola does not explicitly teach the apparatus of claim 1, comprising the first device polling a second device for a response control message subsequent to sending a control message to the second device or comprising the intermediate device periodically polling a plurality of second devices coupled to the data path for control messages for the first device. However, Chernock, in the same field of

managing storage devices, discloses polling a device or a group of devices for the state of their storages by using control messages [see Chernock, Fig. 2 and Col. 6, Lines 32-65]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Chernock into the teaching of Pesola in order to periodically monitor the state of storage devices.

Claims 20-21 are rejected under the same rationale set forth above to claims 2-3.

Claims 26-27 are rejected under the same rationale set forth above to claims 2-3.

Claims 29-30 are rejected under the same rationale set forth above to claims 2-3.

5. Claims 6 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pesola et al (Hereafter, Pesola), U.S. Pat. No. 7,007,152 in view of Bitner et al, (Hereafter, Bitner), U.S. Pat. Application Pub. No. US 2004/0153614 A1.

Regarding claim 6, Pesola does not explicitly teach the apparatus of claim 1, wherein each transport data message comprises a Small Computer Systems Interface (SCSI) Command Descriptor Block (CDB) that encapsulates a control message. However, Bitner, in the same field of managing storage devices, discloses a Small Computer Systems Interface (SCSI) Command Descriptor Block (CDB) with a control message [see Bitner, Paragraphs 0083-0084]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Bitner into the teaching of Pesola in order to periodically monitor the state of storage devices using Fibre Channel protocol via Fibre Channel service interface.

Claim 24 is rejected under the same rationale set forth above to claim 6.

6. Claims 7, 10, 12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Hereafter, APA) in view of Pesola et al (Hereafter, Pesola), U.S. Pat. No. 7,007,152.

Regarding claim 7, APA teaches an apparatus for communicating control messages between a media controller and a storage device [see Fig. 1], comprising:

a media controller (= library manager 106) configured to direct control messages for a plurality of storage devices over a host control path [see Fig. 1];

an intermediate device (= host 104) coupled to the host control path and configured to transmit control messages received over the host control path as transport data messages on a data path connecting the intermediate device to the plurality of storage devices and transport data messages received over the data path as control messages [see Fig. 1 and Paragraphs 0005-0010 on Pages 2-3 of the Instant Application's Specification]; and

APA does not explicitly teach the plurality of storage devices are configured to translate transport data messages received over the data path into control messages and control messages for the media controller into transport data messages for transmission over the data path to the intermediate device. However, Pesola, in the same field of data storage library control endeavor, discloses volume translation apparatus with volume mapping module between the host and the data storage library

for translating and sending control message and data message over control path and data path between host and data storage library [see Pesola, Figs. 1-3 and Col. 5, Line 16 to Col. 6, Line 55]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Pesola into the teaching of Admitted Prior Art in order to efficiently control the storage devices for mounting and unloading media cartridges.

Regarding claim 10, APA does not explicitly teach the apparatus of claim 7, wherein a storage device notifies the intermediate device of a control message for the media controller and the intermediate device transfers the control message from the second device to the media controller in response to a message from the media controller. However, Pesola in the same field data storage library control endeavor, discloses notifying the intermediate device of a control message for the media controller and the intermediate device transfers the control message from the second device to the media controller in response to a message from the media controller [see Pesola, Fig. 2 and Col. 5, Line 16 to Col. 6, Line 55]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Pesola into the teaching of Admitted Prior Art in order to efficiently control the storage devices for mounting and unloading media cartridges.



Regarding claim 12, APA teaches a system for communicating control messages between a library manager and a storage device over a data path [see Fig. 1], comprising:

a media library (= media library 102) comprising a media library manager (= library manager 106) configured to automatically mount and unload media cartridges (= media cartridges 112) [see Fig. 1]; and

a host (= host 104) configured to communicate over a host control path with the media library manager to access data on a specific media cartridge and to communicate with one or more storage devices over a data path to exchange data, the host further configured to relay control messages between the media library manager and the plurality of storage devices [see Fig. 1 and Paragraphs 0005-0010 on Pages 2-3 of the Instant Application's Specification].

APA does not explicitly teach translating between control messages and transport data messages, the transport data messages traveling over the data path and the control messages traveling over the host control path. However, Pesola, in the same field of data storage library control endeavor, discloses volume translation apparatus with volume mapping module between the host and the data storage library for translating and sending control message and data message over control path and data path between host and data storage library [see Pesola, Figs. 1-3 and Col. 5, Line 16 to Col. 6, Line 55]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Pesola into the teaching of

Admitted Prior Art in order to efficiently control the storage devices for mounting and unloading media cartridges.

Claim 15 is rejected under the same rationale set forth above to claim 10.

Regarding claims 16-17, APA does not teach the system of claim 12, wherein the media library manager is configured to exchange control messages for storage devices over the host control path instead of a direct communication link to the storage devices and wherein the host is configured to function as a storage device controller integrated within the media library and coupled to a plurality of storage devices that have no direct communication link to the media library manager. However, Pesola, in the same field of data storage library control endeavor, discloses exchange control messages for storage devices over the host control path instead of a direct communication link to the storage devices and the host is configured to function as a storage device controller integrated within the media library and coupled to a plurality of storage devices that have no direct communication link to the media library manager [see Pesola, Figs. 1-3 and Col. 5, Line 16 to Col. 6, Line 55]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Pesola into the teaching of Admitted Prior Art in order to efficiently control the storage devices for mounting and unloading media cartridges.

7. Claims 8-9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Hereafter, APA) in view of Pesola et al (Hereafter, Pesola), U.S. Pat. No. 7,007,152 and further in view of Chernock et al (Hereafter, Chernock), U.S. Pat. No. 6,772,209.

Regarding claims 8-9, APA and Pesola do not explicitly teach the apparatus of claim 7, wherein the media controller is configured to poll a storage device for a response control message subsequent to sending a control message to the storage device and wherein the intermediate device periodically polls the storage devices coupled to the data path for control messages for the media controller. However, Chernock, in the same field of managing storage devices, discloses polling a device or a group of devices for the state of their storages by using control messages [see Chernock, Fig. 2 and Col. 6, Lines 32-65]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Chernock into the teaching of APA and Pesola in order to periodically monitor the state of storage devices.

Regarding claims 13-14, APA and Pesola do not explicitly teach the system of claim 12, wherein the media library manager polls the storage devices for a response control message subsequent to sending a control message to the storage device and wherein the host periodically polls the storage devices coupled to the data path for control messages for the media library manager. However, Chernock, in the same field of managing storage devices, discloses polling a device or a group of devices for the

state of their storages by using control messages [see Chernock, Fig. 2 and Col. 6, Lines 32-65]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Chernock into the teaching of APA and Pesola in order to periodically monitor the state of storage devices.

8. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Hereafter, APA) in view of Pesola et al (Hereafter, Pesola), U.S. Pat. No. 7,007,152 and further in view of Bitner et al, (Hereafter, Bitner), U.S. Pat. Application Pub. No. US 2004/0153614 A1.

Regarding claim 11, APA and Pesola do not teach the apparatus of claim 7, wherein each transport data message comprises a Small Computer Systems Interface (SCSI) Command Descriptor Block (CDB) that encapsulates a control message. However, Bitner, in the same field of managing storage devices, discloses a Small Computer Systems Interface (SCSI) Command Descriptor Block (CDB) with a control message [see Bitner, Paragraphs 0083-0084]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Bitner into the teaching of APA and Pesola in order to periodically monitor the state of storage devices using Fibre Channel protocol via Fibre Channel service interface.

Claim 18 is rejected under the same rationale set forth above to claim 11.

***Other References Cited***

9. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

- A) Lubbers et al, U.S. Pat. No. 7,007,042.
- B) Jesionowski et al, U.S. Pat. No. 6,338,006.
- C) Harrison et al, U.S. Pat. No. 6,128,717.
- D) Hipp et al, U.S. Pat. No. 6,891,837.
- E) Dunham, U.S. Pat. No. 6,269,431.

10. A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET TO EXPIRE THREE MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION. FAILURE TO RESPOND WITHIN THE PERIOD FOR RESPONSE WILL CAUSE THE APPLICATION TO BECOME ABANDONED (35 U.S.C. § 133). EXTENSIONS OF TIME MAY BE OBTAINED UNDER THE PROVISIONS OF 37 CAR 1.136(A).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (571) 272-3991. The Group fax phone number is (571) 273-8300. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar, can be reached on (571) 272-4006.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
PHILIP TRAN  
PRIMARY EXAMINER

Art Unit 2155  
June 11, 2007